REMARKS

Claims 1-9 are currently pending in the application; with claims 1, 7, and 9 being independent. Claims 1, 7 and 9 have been amended to more appropriately define aspects of the invention. In light of the amendments and remarks included herein, Applicants respectfully request entry of this amendment and withdrawal of the outstanding rejections.

Allowable Subject Matter

The Examiner objected to claim 3 as being dependent upon a rejected based claim, but would be allowable if rewritten in independent form. Applicants wish to thank the Examiner for the indication of allowable subject matter.

Claim Rejections Under 35 USC §103: Takizawa, Watanabe, and Bhaskaran

In the outstanding Office Action, the Examiner rejected claims 1, 6, 7, and 9 under 35 USC §103(a) as being unpatentable over USP 6,097,737 to Takizawa et al. ("Takizawa") in view of Japanese Publication No. JP 09-182079 to Watanabe ("Watanabe") and "Image and Video Compression Standards – Algorithms and Architectures," 2nd Ed., 1999 to Bhaskaran et al. ("Bhaskaran"). Applicants respectfully traverse this rejection because the Examiner has failed to establish a *prima facie* case of obviousness.

Takizawa merely teaches an information transmission method and apparatus wherein several types of information may be encoded and transmitted efficiently within given frequency bands to different receivers (column 1-11). Specifically, Takizawa teaches an image data encoding unit (41) which encodes image data prior to transmission. (Column 5, lines 28-32; Figure 5.) In this image data encoding apparatus, Takizawa features an extraction circuit (115) which calculates essentially the power level within an image frame (column 5, lines 33-35). The calculation occurs over a 16x16 pixel block within a particular frame (equation 2, column 5, line 41; column 6, lines 23-26; Figures

6(a)-6(c)). Based upon the PWR levels are calculated, each block is classified into one of class 0 through class 3. These classifications are called quantization auxiliary parameters and are generated by an adaptive processing circuit (116) based upon the PWR values (column 5, lines 53-57). These classifications in turn are used to derive quantization auxiliary parameters, Q_{suv}, which affect a rate control circuit (118) (column 5, line 59 through column 6, line 23). Specifically, these quantization parameters are generated by a rate control circuit (118) fed into the quantization (115) through multiplier (117). (See Figure 5.) The quantization parameter controls the quantization processing for a frame based upon the features and the image calculated by the feature extraction circuit (115) (column 7, lines 53-58).

Conversely, Takizawa fails to teach or suggest, at least, "a control portion for setting interframe encoding parameters based on the amount of image features extracted in the encoding preprocessing portion," as recited in claim 1 and "encoding the moving image whose frames are sorted based on an interframe encoding parameter set according to the amount of image feature," as recited in claim 7, and "a control module operatively connected to the encoding preprocessing module, wherein the control module sets interframe encoding parameters based upon the extracted interframe feature information," as recited in claim 9. (Emphasis added.)

Takizawa is distinguished by modifying **intraframe processing parameters** in quantization circuit (105). Quantization circuit (105) operates on each frame subsequent to DCT processing. The features recited in claims 1 and 7 have the advantage of modifying the processing between frames for effective coding of dissolve transitions.

Watanabe and Bhaskaran fail to cure the deficiencies of Takaizawa in this respect.

Watanabe merely discloses an interframe encoding method which only automatically detects a dissolve section from a moving image (see Abstract, lines 1-2). Specifically, Watanabe initially

computes an average of a first difference between image frames and performs a threshold (see Abstract, lines 3-7). If this absolute value of the first order difference is larger than a preset threshold, a second order difference computing the interframe difference images of the first order difference image is calculated (Abstract, lines 8-12). Once the second order of difference is computed, it is compared with a second threshold in order to detect a dissolved state. (See Abstract, lines 12-16.) In summary, Applicants submit that Watanabe merely detects the presence of a dissolved step, however Watanabe does not teach the features presented in claims 1, 7, and 9.

Bhaskaran fails to cure the deficiency of Takizawa because Bhaskaran is silent with respect to this feature. Bhaskaran merely teaches reordering encoded pictures in order for the decoder to have all the information its need to decode each received picture (see page 190, paragraph two, lines 1-9).

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejections of independent claims 1, 7, and 9. Claim 6 depends from claim 1 and is allowable by virtue of its dependency of allowable claim 1.

Claim Rejections Under 35 USC §103: Takizawa/Watanabe/Bhaskaran/Fernando

The Examiner rejected claims 2, 4, and 8 under 35 USC §103(a) as being unpatentable over Takizawa, Watanabe and Bhaskaran, and further in view of "International Conference on Image Processing", Vol. 3, 24-28 October 1999, pages 299-303 to Fernando, et al. ("Fernando"). Applicants respectfully traverse this §103 rejection.

Claims 2 and 4 depend from allowable claim 1 and include all of the features recited therein; claim 8 depends from claim 7 and includes all of the features recited therein. Fernando fails to cure the deficiencies of Takizawa and Bhaskaran as presented above in the arguments for the allowability of

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independent claims 1, 7, and 9. Applicants therefore respectfully request the Examiner to withdraw the rejections of claims 2, 4, and 8.

Rejections Under 35 USC §103: Takizawa/Bhaskaran/Mutoh

The Examiner rejected claim 5 under 35 USC §103(a) as being unpatentable over Takizawa and Bhaskaran further in view of USP 6,631,210 to Mutoh, et al. ("Mutoh"). Applicants respectfully traverse the rejection of claim 5.

Claim 5 depends from claim 1 and includes all of the features recited therein. Mutoh fails to cure the deficiencies of Takizawa and Bhaskaran because Mutoh is silent with respect to the features provided above in the arguments for the allowability of claims 1, 7, and 9. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 5.
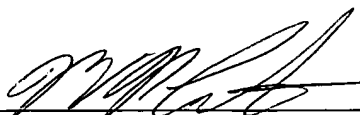
Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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